



## CASE STUDY REPORT

# Developing the Application of Functional Skills at KS3

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*This study was originally published in 2010 as part of the 'What Works Well' initiative, part of the National Strategies for Education in England.*

## Abstract

**Background:** The purpose of the study was to develop students' ability to apply their learning with independence and confidence, in increasingly complex problem-solving situations, by providing them with opportunities to use skills and knowledge from a range of subject areas.

**Aims:** The main aim of the development work is to improve pupils' ability to apply their learning independently in problem-solving situations, drawing on skills and knowledge from a range of subject areas.

**Methods:** The participants in this development work were a core team of teachers from a range of departments, the senior management team, local authority consultants, and the pupils.

Methods used included training through department meetings, providing unit plans with resources and lesson plans, modelling possible approaches, and reviews after each unit to improve future delivery.

**Findings:** The main findings are that applied learning lessons have had a positive impact on pupil learning, teaching, and school organisation and leadership. Pupils are more engaged, teachers are more aware of the importance of using relevant contexts, and departments are accessing the applied learning unit plans to plan projects.

**Implications:** The findings suggest that providing students with opportunities to apply their skills and knowledge from a range of subjects in realistic contexts can help them become more independent and confident in problem-solving. This can lead to improved engagement and performance in all subjects.

*This abstract was generated by Camtree using a large language model (LLM) and added to the original report in 2023.*

**Keywords:** Secondary education; English - reading; English - speaking and listening; English - writing; Information and Communication Technology; Mathematics

## Introduction

### What were your reasons for doing this type of development work?

At Brune Park, we are aware that our students have difficulties with two particular aspects of learning - understanding how to solve a problem by using their current knowledge and skills, and seeing the links between subjects across the curriculum. We believe that if we can address these weaknesses, our pupils will perform better across all subjects, and will be better prepared for the future, both in school and beyond. We decided to design a course to address the functional skills criteria that would develop our students' ability and confidence in solving real life problems, drawing on skills and knowledge from a range of subject areas.

### Who might find this case study useful?

- Headteacher
- Middle leader
- Senior leadership team (SLT)
- Subject leader
- Teacher

## Description

### What specific curriculum area, subject or aspect did you intend to have impact on?

- English - reading
- English - speaking and listening
- English - writing
- Information and Communication Technology
- Mathematics

### How did you intend to impact on pupil learning?

We wanted to develop our pupils' ability to apply their learning, firstly by recognising situations where subject-specific learning could be used to solve problems in realistic contexts, then by structuring a solution to the problem, using relevant skills and knowledge. We were seeking to improve our pupils' engagement by helping them to see that their learning could be of use, not only in their lessons, but in life outside the classroom.

By addressing these issues at key stage three, we hoped to develop the pupils' ability to apply their learning with increasing confidence, so that when they reach key stage four, they will be more capable of working independently. It was also intended that planning and delivering the applied learning lessons would strengthen cross-curricular links, by providing staff with an opportunity to work with colleagues from other departments, and by giving pupils opportunities to apply learning from a range of subjects, and by ensuring that they were aware that they were doing so.

### What were your success criteria?

The main success criterion was that pupils would be able to apply their learning with independence and confidence, in increasingly complex problem-solving situations. This was measured in a number of ways - by the amount of scaffolding needed to ensure that the pupils could find a solution to the problem, by teachers' judgements based on conversations between the teacher and the pupils as they were working, and by the pupils' self-assessment in the form of a review which they wrote at the end of each unit, outlining what areas of the curriculum they had used and how successfully they had used them to solve the problem. We wanted to see a reduction in the amount of scaffolding needed as the pupils' level of independence increased, and a greater

awareness amongst the pupils of what skills and knowledge they had used in solving the problem.

### What information or data did you use to measure progress towards your success criteria?

- Learning walks / study visits
- Logs or interviews
- Observation outcomes
- Pupils' work

### Describe the CPD approaches you used

The pedagogy required for the development of functional skills is very different from the teaching approaches that were prevalent across the school at this time. The starting point was to identify teachers from a range of departments who would be innovative, prepared to take risks and capable of motivating and inspiring the pupils. Once the core team was identified, training was delivered through department meetings. The training introduced the staff to the functional skills criteria and provided opportunities for the teachers to discuss approaches to developing independent learners and helped them to see the importance of doing so. The staff involved were supportive and excited at the prospect of delivering the applied learning lessons. The unit plans were made available to the staff, possible approaches to delivering them were modelled and subject specialists were on hand to deal with queries relating to subject-specialist knowledge and pedagogy. The key message of the training was that the aim of the lessons was to develop the pupils' ability to apply their skills and knowledge independently in order to solve problems in a range of contexts. After each unit had been delivered, there was an opportunity to review the unit so that it could be improved prior to future use. These reviews also provided useful information about how staff could be better prepared in the future, to ensure that the unit was delivered in a way which maximised the opportunities for pupils to develop their ability to apply their skills.

### What CPD materials, research or expertise have you drawn on?

The unit plans have largely been developed from scratch by myself. They are now available to all staff, complete with resources and lesson plans. The expertise of local authority consultants, particularly for mathematics and ICT, has been invaluable throughout.

### Who provided you with support?

- Middle leader
- Other
- Senior management
- Subject leader

### How were you supported?

The senior management team, in particular the first vice principal, was instrumental in providing the right staffing team, supporting the training and timetabling the lessons in ICT suites.

The Local Authority provided functional skills training which included many ideas and activities, some of which were incorporated into our unit plans.

### Impact

## What has been the overall impact on pupil learning?

We are still in the first year of delivering applied learning lessons so there is, as yet, limited evidence of impact. The reviews that pupils write at the end of each unit demonstrate an increasing awareness of the skills they have used and an improving understanding of how to structure a solution to a problem. Pupil voice interviews indicate that pupils value the lessons and that they appreciate the opportunity to apply their learning from a range of subjects in realistic contexts. Teachers report that pupils are more able to make decisions, are working with increasing independence and are more confident in applying their skills to solve problems.

## Thoughts you think are relevant to overall impact on learning

We intend to enter all pupils for a functional skills stand-alone assessment in year nine, at a level appropriate to the pupil.

The original unit plans for the applied learning lessons focused on using skills from English, mathematics and ICT. However, it has become clear that opportunities to apply skills from other subjects arise in many of the units. For this reason, we are planning to set up a working party with all subject areas represented, to further develop the unit plans ensuring that pupils have the opportunity to develop their ability to apply their skills and knowledge from all subjects, at a level and at a time that is appropriate.

## Quotes you think are relevant to overall impact on learning

- 'It is fun not knowing what problem you are going to be tackling.'
- 'The Maths we do in Applied Learning is real life problems.'
- 'We have to figure out what question we are really being asked.'
- 'The lesson is like a brain puzzle where we have to use our knowledge.'
- 'It's really good because now I can see why I learn certain stuff.'
- 'It was weird doing Maths in another subject, but now I see how it makes sense and I can use it at home.' - THESE ARE ALL QUOTES TAKEN FROM THE STUDENT VOICE CONDUCTED BY EXTERNAL VISITORS.
- 'Students are beginning to see the point in learning Maths!'
- 'I am beginning to see a real change in the way they tackle open ended tasks.'
- 'I have definitely noticed a shift in the amount of support I am needing to give the students.' - STAFF QUOTES.

## Quantitative evidence of impact on pupil learning

- Periodic teacher assessment

## Qualitative evidence of impact on pupil learning

- Logs or interviews
- Observation outcomes
- Pupils' work

## Describe the evidence of impact on pupil learning

As we are in our first year, quantitative data is not yet available. Qualitative judgements indicate that the applied learning lessons are having a real impact on pupils' ability to work independently on tasks which require them to apply skills and knowledge from a range of subject areas.

## What has been the impact on teaching?

There are currently eight teachers delivering the year seven lessons and a different nine teachers delivering the year eight lessons. Even at this early stage, there has been a noticeable change in the teaching approaches adopted, as the teachers develop their skills in encouraging the pupils to work independently. Teachers report that delivering the applied learning lessons has had an impact on how they teach in their subjects; they are more aware of the importance of using relevant contexts and of providing opportunities for the pupils to make decisions. This has been evidenced in lesson observations in departments.

## Evidence of impact on teaching

- Evidence from observation and monitoring
- Improvements in curriculum documentation
- Teacher perceptions

## Describe the evidence of impact on teaching

Reports of lesson observations conducted in departments include reference to more problem-solving activities, and greater application of learning in relevant contexts.

## What has been the impact on school organisation and leadership?

As a leadership team we are looking for opportunities to develop the pedagogy of applied learning beyond these discrete lessons in key stage three. We are already seeing an impact on the teaching approaches used across the school, though currently this is mainly in lessons delivered by the teachers involved in the applied learning. With the pastoral senior leader and the careers manager, we are planning to build on what we have achieved by incorporating some of the ideas and approaches into enterprise days and citizenship.

## Evidence of impact on school organisation and leadership

As departments review their schemes of work in readiness for September 2010 when functionality will be embedded into English, mathematics and ICT GCSEs, they are accessing the applied learning unit plans so that they can plan projects in their own subject areas which follow on from what the pupils have been working on in applied learning.

## Summary

### What is the crucial thing that made the difference?

The most crucial element has been the cross-curricular nature of the applied learning. By providing pupils with opportunities to use skills built in one subject in a different setting, we have started to break down the 'barrier' of pupils thinking that, for example, they will only ever use mathematics in a mathematics lesson. This has opened the pupils' eyes to the possibility of their learning being useful outside of the lesson in which it was first delivered. As a result, pupils are more engaged and are actively seeking opportunities to use skills and knowledge from one subject in a different context.

As a mathematics teacher, I am aware of the difficulties pupils have had in the past with applying their learning; for example, two weeks after learning how to draw a line graph in mathematics, they seem incapable of doing so when one is needed in a science lesson. I am optimistic that as the pupils develop their functionality in the applied learning lessons, problems such as these will diminish.

## What key resources would people who want to learn from your experience need access to?

Functional skills criteria for English, mathematics and ICT.

One lesson per week in each of year seven and year eight, timetabled in ICT suites.

Time to develop the unit plans and to train the teachers who will be delivering the course.

## What CPD session and resources were particularly useful?

The LA Functional Skills training events were very useful, delivered primarily by Jenny Burn and Tessa Ingrey.

All teachers involved need a good working knowledge of the Functional Skills criteria.

National strategy resources:

## If another individual or school was attempting to replicate this work, where would they start and what would the essential elements be?

The starting point would be to identify what already exists in the school that could be built upon with regard to cross-curricular learning, developing functionality and applied learning.

Identifying the teachers who are prepared to take risks and allow pupils to take risks, or teachers who can be trained to do so, is critical. We began with teachers of English, mathematics and ICT, but on reflection, their willingness to allow the pupils to make decisions and to work independently was more important than their subject background.

Ideally, the unit plans will be produced with input from representatives of the core subjects. The modelling of possible teaching approaches prior to the teachers' delivering the units was effective in ensuring that the staff concerned understood that the aim of the lessons was to develop the pupils' problem-solving ability, not to solve the problem!

## What further developments are you planning to do (or would you like to see others do)?

We are planning to develop the cross-curricular links, so that there is better coordination between the applied learning lessons and departmental schemes of work.

We see this model of delivering functionality in discrete lessons as a 'step on the way' to creating more independent learners. The ultimate endpoint would be that all pupils were able to apply their learning independently in a range of contexts through their experiences in all subjects across the curriculum, in which case these applied learning lessons would be redundant.

We are planning to enter all pupils for a functional skills assessment at the appropriate level in year nine. However, we are confident that the benefits of developing our pupils' ability to apply their learning go far beyond simply enabling them to gain an extra qualification.

## Supplementary Materials

This report is accompanied in the library by the following supplementary material:

- Designing a fish tank
- Lesson Plan: Lesson One Fish Tank Problem
- Example of pupil evaluation from module

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## About 'What Works Well'

This case study was originally published as part of the 'What Works Well' section of the National Strategies for Education in England. The National Strategies were professional programmes aiming for improvements in the quality of learning and teaching in schools in England. 'What Works Well' involved teaching practitioners from all phases and areas of education sharing accounts of real developments which had improved learning and teaching, and made a difference to pupil progress. 'What Works Well' case studies were designed to support practice transfer and include sufficient detail and resources to enable others to implement the effective practice described. They were reviewed by experts prior to publication as 'User Generated Content' (UGC) under a licence which encouraged reuse and derivative works, but which precluded commercial use.

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